ILECs will have diminished incentives to invest in upgrading and improving their own facilities because any such gains would have to be shared with competitors. As Justice Breyer recognized in his concurrence, "a sharing requirement may diminish the original owner's incentive to keep up or improve the property by depriving the owner of the fruits of value-creating investment, research, or labor." *Iowa Utils. Bd.*, 119 S. Ct. at 753 (Breyer, J.).[13]

Unbundling rules that require facilities to be shared when substitutes are available in the marketplace cannot be squared with the limiting language of section 251(d)(2) or the Act's objective of promoting competition. The very real dangers to investment incentives posed by overbroad unbundling, according to Justice Breyer, necessarily impose corresponding "limits upon the FCC's power to compel unbundling" that are closely "related," if not identical, to those applicable under the "essential facilities" doctrine. *Id.* Section 251(d)(2)'s "impair" test therefore requires the Commission to articulate, in Justice Breyer's words, "a *convincing explanation* of why facilities should be shared (or 'unbundled') where a new entrant could *compete effectively* without the facility, or where *practical alternatives* to the facility are available." *Id.* (emphases added). This requirement is based on the recognition that "[r]egulatory rules that go too far, expanding the definition of what must be shared beyond that which is

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[13] *See also* 119 S. Ct. at 753 ("No one can guarantee that firms will undertake the investment necessary to produce complex technological innovations knowing that any competitive advantage deriving from those innovations will be dissipated by the sharing requirement."); Kahn Declaration at 16-17 ("The notion that the ILECs are likely to find it profitable to engage in such unprecedentedly risky investments as they now contemplate . . . under a regulatory regime that requires them immediately to share those facilities with any and all competitors who ask for them -- competitors who are subject to no such obligation -- at prices based on the Commission's, hypothetical, most-efficient-firm cost standard.").

essential to that which merely proves advantageous to a single competitor, risk costs that, in terms of the Act's objectives, may make the game not worth the candle." *Id.* at 754 (emphasis added).[14]

It is precisely because of the risk that competitive innovation will be stifled that competition law mandates the strictest limits on any compelled sharing of facilities. "Compulsory access, if it exists at all, is and should be very exceptional." Areeda, *Essential Facilities*, 58 ANTITRUST L.J. at 852 (cited in *Iowa Utils. Bd.*, 119 S. Ct. at 753 (Breyer, J.)).[15] Consistent with these limitations, the Commission cannot (as is contemplated by the *Notice of Proposed Rulemaking*) adopt a presumptive list of UNEs and put the burden on ILECs to prove the availability of substitutes in particular areas. Rather, the burden must be on those seeking compelled unbundling to show by convincing evidence that CLECs cannot compete effectively using substitutes available from alternative sources in the marketplace. Indeed, it is particularly

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[14] We recognize that the Supreme Court majority did not decide whether, "as a matter of law," the Commission must strictly apply the essential facilities standard. *Iowa Utils. Bd.*, 119 S. Ct. at 734. "[I]t may be," the Court stated, "that some other standard would provide an equivalent or better criterion for the limitation upon network-element availability that the statute has in mind." *Id.* Our point is that, because the compelled unbundling of network elements under the Act is *no different in substance from, and creates the same significant risks as*, the compelled sharing of a competitor's facilities under the essential facilities doctrine, the Commission's application of the "impair" standard should be informed by the core principles of that doctrine. But regardless of the label used, any reasonable standard for the "limitation upon network-element availability that the statute has in mind" must take account of the availability of substitute elements in the marketplace and must focus on whether CLECs can effectively compete without access to the ILEC's facility. That conclusion is compelled by the Court's holding that section 251(d)(2) is not satisfied merely by a showing that without access to the ILEC facility, CLECs will experience higher costs or lower service quality. *See id.* at 735 n.11.

[15] This principle is universally reflected in essential facilities cases. *See, e.g., Caribbean Broad. Sys.*, 148 F.3d at 1088; *City of Anaheim v. Southern Cal. Edison Co.*, 955 F.2d 1373, 1381 (9th Cir. 1992); *City of Chanute v. Williams Nat. Gas Co.*, 955 F.2d 641, 648 (10th Cir. 1992); *Twin Labs., Inc. v. Wieder Health & Fitness*, 900 F.2d 566, 570 (2d Cir. 1990).

appropriate to place the burden of proof on CLECs, because they are the parties uniquely situated -- by virtue of their position as purchasers of alternative facilities and wholesale capacity -- to know the most detailed information about the market availability of effective substitutes.

The Commission, moreover, plainly has the investigatory tools at its disposal to require CLECs to provide all the information it needs to assess comprehensively the availability of alternative facilities. A failure to do so will obviously run afoul of the Supreme Court's mandate, which expressly required the Commission to evaluate "the availability of the elements outside the incumbent's network." *Iowa Utils. Bd.*, 119 S. Ct. at 736.

Accordingly, following these governing principles, the Commission should rule that "the failure to provide access" to any particular network element would "impair" CLECs' ability to provide service within the meaning of section 251(d)(2)(B) *only where the element in question is essential to competition and there is convincing evidence that CLECs cannot effectively compete using substitutes for the element available from alternative sources.*

C. The Unbundling Requirements Must Be Tailored To Match Differences in the Availability of Substitutes in Particular Geographic Markets.

Basic competition law also requires the Commission to analyze distinct geographic markets in defining section 251(d)(2)'s unbundling requirements. Application of the "impair" standard to particular elements must be tailored to accommodate differences in the availability of substitute facilities within the relevant geographic market for each network element.

In other words, before the Commission requires an element to be unbundled, it must determine the proper scope of the geographic market for that element, and it should impose an

unbundling obligation only in those markets where the ILEC's network element is the only reasonable alternative available to competitors.[16] The Supreme Court's remand order made this requirement explicit by instructing the Commission to adopt rules that reflect the "availability of elements outside the incumbent's network." *Iowa Utils. Bd.*, 119 S. Ct. at 735. Because the geographic scope for the available supply and use of substitutes necessarily differs by element, the Commission may not adopt a single uniform "one size fits all" national unbundling requirement that ignores relevant market differences.

Nor could the Commission ignore variations between markets simply by delegating to state commissions authority to *relieve* ILECs of a national unbundling obligation in specific areas. Such an approach would fail to satisfy the Commission's obligation to apply the "necessary" and "impair" standards "[i]n determining what network elements should be made available." A national rule requiring that an element be unbundled -- imposed in the face of evidence that substitutes are available in certain geographic markets -- would suppress actual competition in those markets and would plainly stifle the investment incentives of existing facilities-based CLECs.

Geographic tailoring will not impose any significant administrative burden on the Commission. As the wealth of evidence supplied by GTE below and in the accompanying submissions shows, the availability of substitutes for each of the elements on the original Rule

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[16] No facility can be "essential" under antitrust principles unless it is "shown to dominate a properly defined relevant market." Areeda & Hovenkamp, ANTITRUST LAW at 208. *See, e.g., Blue Cross & Blue Shield United v. Marshfield Clinic*, 65 F.3d 1406, 1413 (7th Cir. 1995); *City of Malden v. Union Elec. Co.*, 887 F.2d 157, 162 (8th Cir. 1989).

319 list is sufficiently clear that the Commission can readily adopt standards that are reasonably tailored to market differences.

D. Any Reasonable Unbundling Standard Must Focus on the Actual Use and Availability of Substitutes in the Marketplace and the Real-World Behavior of CLECs, Rather Than on Any Hypothetical Model or Element-To-Element Cost Comparison.

Regardless of whether the Commission applies essential facilities principles or articulates some other standard, any rational unbundling requirement must look first and foremost to the real-world behavior of actual CLECs. If CLECs are competing today using alternative facilities, whether through self-provision or on a wholesale basis, that should be enough to preclude unbundling. The Commission need not construct any hypothetical model to predict whether such competition is possible. As Professor Kahn has explained, when CLECs are already in the market relying on substitutes to an ILEC element, "that fact demonstrates that obtaining [the element] from the incumbent is not 'essential' in the most elementary meaning of the term, and sharing of that element should not be required." Kahn Declaration at 7.[17]

The Commission has repeatedly endorsed such an approach. Thus, the Commission has concluded that the ability of a single LEC (or small numbers of LECs) to interconnect at a particular network point, *see First Report and Order* ¶ 204, to provide access to operations

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[17] *See also* Kahn Declaration at 8 (an entrant's demonstrated ability "to use its own facilities, whether by purchase or construction, . . . clearly demonstrates" that the facilities of the [ILEC] are not 'essential' -- "a conclusion reinforced by consideration of the diverse technologies and capabilities converging on the offer of telecommunications services"); Areeda & Hovenkamp, ANTITRUST LAW at 202 ("evidence that the plaintiff is already profitably in the market in which the essential facility is claimed suggests the claimed facility is not essential").

support systems, *see id.* ¶ 520, to offer shared transport in conjunction with local switching,[18] to provide trunk-side interconnection,[19] and to reduce overall operating expenses,[20] confirms that other LECs can accomplish the same task. Likewise, economic logic dictates that competitive strategies successfully implemented by one CLEC in one geographic market can be implemented successfully by other CLECs in other markets that share the same defining characteristics. *See* Kahn Declaration at 6-7, 9.

Moreover, the Commission may not set unbundling requirements on the basis of some designated per-element cost differential. The real-world evidence that actual CLECs are competing using substitutes for an ILEC element may not be ignored merely because ILECs might "enjoy[] a cost advantage" with respect to that particular element. Areeda & Hovenkamp, ANTITRUST LAW at 205. As the Supreme Court made clear, the relevant inquiry is whether CLECs, based on their total costs of doing business, are able to compete using their own facilities or facilities purchased from wholesalers -- not whether they "receive[] a handsome profit but [are] denied an even handsomer one" by the absence of an unbundling obligation. *Iowa Utils. Bd.*, 119 S. Ct. at 735 n.11.

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[18] *See In re Implementation of Local Competition Provisions*, Third Order on Reconsideration and Further Notice of Proposed Rulemaking, CC Docket No. 95-185, 12 FCC Rcd.. 12460, at ¶ 26 n.77 (Aug. 18, 1997).

[19] *See In re Need to Promote Competition and Efficient Use of Spectrum for Radio Common Carrier Services*, Declaratory Ruling, Report No. CL-379, 2 FCC Rcd 2910, at ¶ 31-33 (May 18, 1987).

[20] *See* J. Atkinsin, C. Barnekov, D. Konuch, W. Sharkey & B. Wimmer, *The Use of Computer Models for Estimating Forward-Looking Economic Costs: A Staff Analysis*, at ¶ 64 (Jan. 9, 1997).

Thus, any analysis into the competitive effects of denying access to an ILEC element cannot turn on a formulaic comparison between the cost of a particular substitute for a single element and the cost of purchasing that element from the ILEC. Indeed, such a comparison would shed no light on the competitive viability of a substitute, given the circular nature of comparing a CLEC's cost to an ILEC price established not by the market, but by the Commission. Rather, as Professor Kahn has explained, such an analysis would have to take into account *all* the factors relevant to determining whether a firm can remain competitive in the marketplace, including the competitive advantages facilities-based CLECs have -- from efficiencies stemming from newer network equipment, to economies of scope created by opportunities for product bundling -- and the competitive disadvantages ILECs face, including significant *diseconomies* of scale stemming from obligations to serve all customers in a given territory.[21] Only if this complete picture establishes that, *on balance*, CLECs are unable to compete effectively without access to an ILEC element would section 251(d)(2)'s "impair" test be satisfied.

Constructing a hypothetical or standardized model of CLEC versus ILEC costs would require an extraordinary regulatory enterprise and would necessarily produce arbitrary results.

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[21] *See* Kahn Declaration at 12 ("The point is that a narrow focusing on a particular cost advantage or disadvantage associated with the availability or unavailability of a specific network element could not ascertain a specific cut-off point as permitting or precluding competition, because it fails to take into account the likely offsetting advantages that CLECs are likely to enjoy -- in varying degrees depending upon their own situations -- economies of scale and scope that they would be in a position to exploit by offering local exchange services in combination with their own particular mixes of offerings, as well as the ability to take advantage of available new technologies.").

Different CLECs -- just like different ILECs -- do not have the same costs, nor do they share identical competitive advantages and disadvantages.[22] It would therefore be almost impossible for the Commission to develop a model that calculates, as suggested by the *Notice of Proposed Rulemaking*, "what constitutes a 'material' difference" in the cost of "obtaining a network element from an incumbent LEC as opposed to obtaining it through self-provisioning or from an alternative source." *Second Further NPRM* ¶ 25. Fortunately, where the marketplace has already demonstrated that a CLEC can compete using a substitute for an ILEC element, there is no need for the Commission to determine whether a *hypothetical* CLEC would be impaired in its ability to compete without that element. If CLECs are actually in the market and competing successfully relying on substitute facilities, no further evidence is required for the Commission to conclude that the ILEC's element should not be subject to an unbundling obligation.

E. Access To a "Proprietary" Feature, Function or Capability of a Network Element Should Be "Necessary" Under Section 251(d)(2)(A) Only Where the Proprietary Feature, Function or Capability Is Integral To the Operation of the Element Such That CLECs Cannot Make Use of the Element Without Such Access.

As explained above, all elements must satisfy the "impair" test before they can be subject to unbundling. Over and above the "impair" test, however, section 251(d)(2) also requires the Commission to determine whether "access to such network elements as are proprietary in nature is necessary" before subjecting them to an unbundling obligation. This requirement imposes a second test that must be satisfied before "proprietary" elements are required to be unbundled.

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[22] *See id.* at 13 (any effort to determine the viability of a substitute by measuring cost differentials "is an intensely regulatory one" that will be "confounded" by the complexity of the project and lack of uniformity among CLECs).

Few, if any, network elements (and none of the original UNEs defined in Rule 319) are *entirely* proprietary in nature. The most reasonable interpretation of section 251(d)(2) must recognize that the "necessary" test should apply to proprietary *features, functions or capabilities* of network elements, which are themselves defined to be "network elements" under the Act. *See* 47 U.S.C. § 153(29). One example would be a proprietary advanced calling feature developed specially by the ILEC and not offered generally by other telephone companies. If the proprietary feature or functionality is not *integral* to the operation of the element of which it is a part -- if a CLEC can make use of the element without access to the proprietary feature or functionality -- then ILECs should not be required to provide access to that aspect of the element. *If, on the other hand, the proprietary portion is integral to the operation of the element such that the element cannot be used without the proprietary feature, function or capability, then access to it is "necessary" and must be provided.*[23]

The purpose of section 251(d)(2)'s "necessary" test is to ensure that investment expectations in intellectual property are not defeated when there is no need to provide access to such property to allow CLECs to compete. The standard we propose is built on the recognition that investment in such property is contingent, to a significant degree, on the prospect that the creator will have an opportunity to earn a substantial return on the investment -- an incentive that

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[23] Of course, if the Commission were to determine that the particular proprietary feature, function or capability in question itself constituted an entirely separate network element (as contemplated by the definition of "network element" in 47 U.S.C. § 153(29)) and that this separate element in its own right was essential to competition and met the "impair" test, such an element would almost certainly also meet the "necessary" test because the proprietary aspect would be inseparable from the entire element.

will be dissipated needlessly if CLECs are afforded access to proprietary features or capabilities that are not integral to an element's functioning. *See* Kahn Declaration at 3.[24]

The Commission's definition of "proprietary" should be crafted with this purpose in mind, encompassing all features, functions and capabilities that are afforded independent legal protection by the intellectual property, trade secret, tort, and contract laws. These laws are designed to create and enforce the expectations of investors seeking to capture returns from risky investments and therefore mark the bounds of legitimate protection for proprietary information.[25] Because the potential for undermining investment incentives is equally great whether the features or functionalities are developed internally by ILECs or by third-parties, section 251(d)(2)'s protections should extend to *all* proprietary aspects of ILEC elements regardless of the source.

F. The Act Precludes the Commission and the States From Requiring ILECs To Unbundle Elements That Do Not Satisfy the "Necessary" and "Impair" Criteria.

The *Notice of Proposed Rulemaking* seeks comment on whether any other factors are "sufficiently important in meeting the goals of the 1996 Act to require the unbundling of a network element, even if such unbundling did not otherwise meet the 'necessary' and 'impair'

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[24] *See also* Areeda & Hovenkamp, ANTITRUST LAW at 217 ("[f]orcing an innovation -- patented or not -- to be shared . . . chills desirable activities"); Evans & Schmalensee, 63 ANTITRUST L.J. at 877 ("*Ex post* rules that limit the returns to successful investments reduce *ex ante* incentives to undertake investments that may prove successful or unsuccessful.").

[25] *See* Evans & Schmalensee, 63 ANTITRUST L.J. at 877 ("The notion that property created through risky investments or uncertain innovations requires special protection is embodied in several sets of legal rules. The patent laws are an obvious example. Investors in new inventions must be able to expect returns that compensate them, on average, for the risks they bear. Otherwise, they would not invest in the first place and the property would not be created.").

standards." *Second Further NPRM* ¶ 30. This suggestion misapprehends the requirements of the Supreme Court's remand order in *Iowa Utilities Board* and the Act's plain language.

The Court instructed the Commission to "giv[e] some substance to the 'necessary' and 'impair' requirements" in determining which elements must be unbundled. *Iowa Utils. Bd.*, 119 S. Ct. at 736. Interpreting the Act in a way that would disregard these standards cannot be squared with that command or the plain meaning of the phrase "at a minimum" in section 251(d)(2)'s opening sentence. By requiring the Commission to consider *at a minimum* the "necessary" and "impair" standards when determining which elements to unbundle, section 251(d)(2) expressly sets out baseline criteria that must be satisfied before a sharing obligation can be imposed. It also gives the Commission authority to consider *additional* factors when making this determination, and to refrain from imposing unbundling obligations on elements that satisfy the "necessary" and "impair" standards if doing so would serve the objective of competition. But any rule predicated on the assumption that these standards could be disregarded would have the opposite effect; it would drain the "necessary" and "impair" requirements of their substance.

Both the Act's plain terms and the Court's decision in *Iowa Utilities Board* therefore compel the conclusion that the Commission must, "at a minimum," always find that the "necessary" and "impair" standards are satisfied before requiring an element's unbundling.

This analysis also demonstrates two other principles the Commission should articulate in its final order to guarantee that section 251(d)(2)'s standards are not deprived of their meaning. *First*, the Commission should confirm that the States are barred from imposing unbundling

obligations pursuant to state law. The Act's "necessary" and "impair" standard establishes limits on ILEC unbundling obligations that cannot be ignored or supplemented without harming competition. Because section 251(d)(3) of the Act expressly provides -- consistent with basic principles of preemption law[26] -- that states cannot adopt mandates inconsistent with section 251(d)(2) or the Act's procompetitive "purposes," the Commission should make clear that states have no authority to predicate additional unbundling obligations on the dictates of state law. As Justice Breyer concluded, "the statute's unbundling requirements, read in light of the Act's basic purposes, require balance." *Iowa Utils. Bd.*, 119 S. Ct. at 754 (Breyer, J., concurring in part and dissenting in part). The balance struck by Congress in section 251(d)(2)'s "necessary" and "impair" standards would be improperly frustrated by a State's efforts to expand or contract the Act's unbundling obligations.

Second, the Commission should establish a rule that elements not subject to an unbundling obligation -- either because the Commission deemed in the first instance that they do not satisfy section 251(d)(2) or because the unbundling obligation lapsed after a sunset -- cannot be secured *ex post* by CLECs pursuant to section 252(i). ILECs like GTE have negotiated hundreds of interconnection agreements since the Act was passed in 1996 and, not surprisingly, these agreements do not all expire on the same date. If CLECs are allowed to use section 252(i) to secure access to elements ILECs are providing pursuant to agreements negotiated *prior to* the

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[26] *See Wisconsin Pub. Intervenor v. Mortier*, 501 U.S. 597, 605 (1991) (federal law preempts state law that "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress"); *English v. General Elec. Co.*, 496 U.S. 72, 79 (1990) (state law is preempted either if it "actually conflicts with federal law" or "regulates conduct in a field Congress intended the Federal Government to occupy exclusively").

date on which the obligations for sharing particular elements are removed, sharing obligations will live a life that far exceeds their procompetitive justification. Allowing CLECs to extend unbundling obligations using section 252(i) would therefore serve only to undermine competition -- a result that cannot be squared with the Act's text or its basic purpose.

G. The Inclusion of Certain Elements in the Section 271 Checklist Does Not Compel Their Unbundling.

Section 271(c)(2)(B) of the Act precludes BOCs from offering originating interLATA services unless they satisfy a number of conditions, including offering CLECs "access or interconnection" to local loop transmission, switching, transport, directory assistance, and operator services. The *Notice of Proposed Rulemaking* seeks comment on whether the Commission should adopt "a presumption that the network elements set forth in the competitive checklist of section 271(c)(2)(B) are subject to the unbundling obligation contained in section 251(c)(3)." *Second Further NPRM* ¶ 41. As demonstrated by the competition principles discussed above, any such presumption in favor of unbundling would be strongly anticompetitive and inconsistent with section 251(d)(2).

First, it would plainly violate the substantive requirements of section 251(d)(2) to impose unbundling obligations on non-BOC ILECs, like GTE, by virtue of the checklist requirements that apply only to BOCs under section 271. A presumption that elements enumerated in section 271 must be unbundled under section 251 -- regardless of the availability or actual use of substitute elements -- cannot be squared with the Supreme Court's clear commands. Moreover, such a presumption would be strongly anticompetitive to the extent it imposed unbundling

obligations more extensive than those compelled by section 251(d)(2)'s "necessary" and "impair" standards. Certainly, Congress never intended for section 271's checklist to *supersede* both the Act's purpose of promoting competition and the plain text of section 251(d)(2).

Second, the Act's express inclusion of particular elements in the BOC checklist, in addition to the general checklist requirement that a BOC make available those elements required to be unbundled under section 251, in fact strongly supports the conclusion that section 271 was intended to impose separate and independent obligations from section 251(d)(2)'s unbundling requirements. Any other reading would render the specifically enumerated checklist items utterly redundant, in violation of basic principles of statutory construction.

Finally, the fact that Congress more than three years ago included certain elements in the section 271 competitive checklist obviously says nothing about whether CLECs can currently compete effectively without access to those elements. Much has changed in the telecommunications marketplace since passage of the Act. As we detail comprehensively in the following sections of these comments, we are in the midst of an ongoing explosion of facilities-based competition that necessarily supersedes any presumption about the prospects for such competition that might have prevailed at the outset in 1996. No such stale presumption can properly displace the substantive examination of today's market as required under section 251(d)(2).

II. CLECs ARE COMPETING EFFECTIVELY USING THEIR OWN FACILITIES -- INCLUDING SWITCHING, TRANSPORT, AND LOOPS -- IN EVERY TYPE OF GTE MARKET.

To assist the Commission in developing its unbundling rules, GTE commissioned PNR & Associates -- a consulting firm with extensive information on the deployment of CLEC facilities and the location and number of CLEC customers -- to profile CLEC activities in eight typical GTE markets. These markets include large urban areas (Los Angeles, Dallas and Tampa), smaller metropolitan areas (Fort Wayne, Indiana and Lexington, Kentucky), a small market (Myrtle Beach, South Carolina) and rural areas (Oxford Junction, Iowa; and LaBelle, Ewing, and Lewistown, Missouri). In each of these markets, CLECs have deployed their own switches, their own fiber networks used to supply interoffice transport, and their own local loops. CLECs operating in these territories are typically able to reach more than 50 percent -- and in some cases as much as *98 percent* -- of the addressable business and residential market just with facilities that are in place *today*. PNR Report at DFW Microplex 4. Moreover, as demonstrated by the PNR profiles of each CLEC operating in GTE's eight representative territories, these competitors have aggressive plans to expand their networks, penetrate new markets, and continue growing their customer bases -- all using their own facilities. GTE's experience therefore confirms that CLECs are achieving great success in the marketplace without relying extensively on unbundled ILEC elements.

There are more than 17 facilities-based competitors operating in GTE's service territory in Los Angeles; 11 in Dallas; eight in Tampa; and two in Lexington and Fort Wayne. *Id.* at 10. And although only one facilities-based competitor operates in each of GTE's three studied small

and rural markets, these competitors have succeeded in acquiring as many as *92 percent* of GTE's customers. *Id.* at Iowa 2. In six of the eight GTE markets surveyed, the predominant method of CLEC entry, *by far*, is a complete bypass of GTE's ILEC network. Competitors in these markets supply service to customers either by constructing their own networks from stem to stern or by supplementing their networks with components purchased from wholesale providers catering to the CLEC community. CLECs serve very few lines in these markets using unbundled GTE elements. Facilities-based carriers thus dominate the CLEC market in urban areas, as confirmed by the following tables identifying the number of lines in GTE's Tampa and Los Angeles territories served by facilities-based CLECs. *Id.* at 14, 16.

TAMPA AREA (GTE Service Territory)			
CLEC	**Bypass**	**Resale Lines**	**UNE Loops**
AT&T	192	33	16
e.spire	1,310	2,940	14
Intermedia	2,000	4,750	
MCI WorldCom	10,117	18	7
Time Warner Telecom	125		
US LEC	74		
WinStar	2,000	9	

LOS ANGELES AREA (GTE Service Territory)			
CLEC	**Bypass**	**Resale Lines**	**UNE Loops**
Allegiance	25		
AT&T	7,150	10	
Cox Telecom	185		
Focal Comms.	350		
GST	2,770	1,100	
ICG Comms.	8,215	900	
MCI WorldCom	10,491	2,596	
MGC Comms.	116		5,274
MediaOne	150		
NextLink	2,400		1,020
PacBell CLEC	2,775		
Teligent	50		
Time Warner Telecom	95	400	
WinStar	2,645		

Likewise, facilities-based CLECs in small markets and rural areas are serving an extraordinary number of lines relative to the small totals in these markets, as the following tables for Oxford Junction (400 lines) and LaBelle, Ewing, and Lewistown (1,516 lines) demonstrate. *Id.* at 20-21.

OXFORD JUNCTION, IOWA (GTE Service Territory)			
CLEC	**Bypass**	**Resale Lines**	**UNE Loops**
Lost Nation-Elwood	370		

LaBELLE, EWING AND LEWISTOWN, MO (GTE Service Territory)			
CLEC	**Bypass**	**Resale Lines**	**UNE Loops**
Mark Twain Comms.	574		

The CLEC networks deployed in the eight studied GTE markets *uniformly* depend on self-provided switching and, with only one exception, on substitutes for unbundled ILEC transport. Moreover, a substantial percentage of these CLECs provide their own loops, network interface devices, signaling, operator services, directory assistance, and operations support systems -- or purchase these items from wholesale providers. Thus, PNR's profile of the CLECs operating in GTE's eight studied markets reveals the following matrix. *Id.* at 23.

CLECs OPERATING IN EIGHT GTE MARKETS						
CLEC	**Switching**	**Transport**	**Loops/NID**	**OSS**	**SS7**	**OS/DA**
Allegiance	✓	✓	*	✓	✓	*
AT&T	✓	✓	✓	✓	✓	✓
Cox Calif. Telecom.	✓	✓	✓			*
e.spire	✓	✓	✓	✓	✓	*
Focal Comms.	✓	*	*			
Frontier	✓	✓	✓	✓	✓	✓
GST	✓	✓	✓		✓	*
HTC Comms.	✓	✓	✓	✓	✓	✓
Hyperion	✓	✓	✓			
ICG Communications	✓	✓	✓	✓	*	*
Intermedia	✓	✓	*	✓	*	*
KMC Telecom	✓	✓	✓			
Level 3	✓	✓	*			

CLECs OPERATING IN EIGHT GTE MARKETS						
CLEC	**Switching**	**Transport**	**Loops/NID**	**OSS**	**SS7**	**OS/DA**
Lost Nation-Elwood	✓	✓	✓	✓	✓	✓
Mark Twain Comms.	✓	✓	✓	✓	✓	✓
MCI WorldCom	✓	✓	✓	✓	✓	✓
MGC Comms.	✓	✓	*			
MediaOne	✓	✓	✓			
NextLink	✓	✓	✓	✓	*	*
PacBell CLEC	✓	✓	*	✓	✓	✓
SBC	✓	✓	*	✓	✓	✓
Teligent	✓	✓	✓	✓	*	✓
Time Warner Telecom	✓	✓	✓			✓
US LEC	✓	✓	*		✓	
USXCHANGE	✓	✓	*	✓		
WinStar	✓	✓	✓	✓	*	*

✓- CLEC self-provides element in some or all markets.
* - CLEC leases element from ILEC or non-ILEC source.
Blank - information not available.

The CLECs operating in GTE's markets are financing their network buildouts by raising extraordinary amounts of capital. For example, both NextLink and Teligent have market capitalizations exceeding $2 billion.[27] Likewise, Intermedia and Winstar have market capitalizations exceeding $1 billion.[28] Having invested these substantial funds in deploying new networks, these CLECS are poised to capture an extraordinary percentage of GTE's customers

[27] Merrill Lynch, *CLEC Vital Signs: Update for 4Q98 and Trends*, at 16 (Mar. 11, 1999).

[28] *Id.*

just with the facilities that are in the ground today. The following table identifies the percentage of the addressable market in GTE's territories that lies within 1,000 feet of CLEC fiber or 18,000 feet of a CLEC switch. Customers falling within either of these ranges could readily be served by a traditional copper loop running from either a CLEC's existing fiber or switch.[29]

IMMEDIATELY ADDRESSABLE MARKETS		
GTE Service Territory In:	**Fiber – 1,000 Feet**	**Switch – 18,000 Feet**
Dallas/Fort Worth Area	98%	91%
Business	97%	93%
Residential	98%	91%
Tampa Area	16%	60%
Business	27%	69%
Residential	14%	58%
Los Angeles Area	18%	64%
Business	25%	67%
Residential	16%	63%
Lexington, KY	42%	78%
Business	55%	81%
Residential	39%	77%
Fort Wayne, IN	25%	55%
Business	31%	58%
Residential	24%	54%

[29] PNR Report at DFW Metroplex 4, Los Angeles 4, Tampa 4, Lexington 4, Fort Wayne 4, and Myrtle Beach 4.

IMMEDIATELY ADDRESSABLE MARKETS		
GTE Service Territory In:	**Fiber – 1,000 Feet**	**Switch – 18,000 Feet**
Myrtle Beach, SC	38%	44%
Business	56%	50%
Residential	33%	42%

Likewise, rural telephone cooperatives are moving out of their traditional ILEC territories and overbuilding GTE's network. Rural cooperative ILECs' ability to fund these CLEC ventures is enhanced by their eligibility for government-subsidized loans and enhanced capital budgets created by the fact that rural cooperatives pay no federal income taxes. For example, in Oxford Junction, Lost Nation-Elwood Telephone Company completely overbuilt GTE's local network and, after launching an aggressive marketing plan, acquired 92 percent of GTE's customers in just a few months. PNR Report at Iowa 2. Similarly, in Ewing, LaBelle and Lewistown, Mark Twain Rural Telephone Company executed a near-complete overbuild of GTE's network and promptly acquired 38 percent of GTE's customers in that territory. *Id.* at Missouri 3. Most of GTE's rural and smaller markets are in close proximity to, or completely surrounded by, similar rural telephone cooperatives.

GTE therefore faces significant competition from CLECs that have deployed their own switching, transport, loops, and other facilities in every kind of market in which it operates. This competition will only get more fierce as these and other CLECs fully implement plans to expand their networks and penetrate new geographic and customer markets. To illustrate just a few examples of these plans:

- NextLink is in the process of completing a traditional fiber network, served by its own switch, that will serve "virtually every business in Dallas." *Id.* at 74.

- Level 3 is currently developing a soft-switch technology that will allow seamless integration of router-based IP networks and traditional circuit-switched telephone networks. It is planning to deploy this technology in a network that will reach 50 of the largest markets in the United States. *Id.* at 58-59.

- Cox Communications recently began providing cable-based telephony to residential and small business customers in California and Nebraska and plans to expand its network -- which relies on self-provided switching -- to reach a wide range of new markets. *Id.* at 27. Similar cable-based service -- also relying on self-supplied switching -- will soon be launched in markets across the country by AT&T and Time Warner. *Id.* at 24, 84.

As will be illustrated in more detail below, the real-world actions of these numerous facilities-based CLECs demonstrate that competition can succeed in every type of market -- urban, suburban, and rural -- without ILECs being required to provide unbundled access to most network elements.

III. THE REAL-WORLD ACTIONS OF CLECs CONFIRM THAT SWITCHING, OPERATOR SERVICES AND DIRECTORY ASSISTANCE, SIGNALING, AND THE NETWORK INTERFACE DEVICE SHOULD NOT BE SUBJECT TO UNBUNDLING.

A. Hundreds of CLECs Currently Self-Supply Their Own Switching in Markets Across the Nation. Switching Therefore Does Not Meet Section 251(d)(2)'s "Impair" Test.

Numerous alternatives to ILEC switching are available to CLECs -- and in fact are currently being used by CLECs -- on a nationwide basis. As of March of 1999, CLECs had deployed a total of 724 switches, with *167 different CLECs* placing switches in *320 different cities*. UNE Fact Report at I-1. PNR's survey of eight typical GTE markets confirmed that *every* facilities-based CLEC operating in those areas self-provided its own switching. Switch

manufacturers are marketing to CLECs products that are inexpensive and highly scalable, allowing even the smallest rural CLECs -- like Mark Twain Rural Telephone operating in GTE's rural Missouri territory -- to self-provide their own switching. Thus, even though the five largest CLECs account for over 70 percent of CLEC revenues, 162 other competitors -- including CLECs that serve only small and insular markets like GTE's territory in Oxford Junction, Iowa -- have found it economical to deploy their own switching. *Id.*

1. CLECs Operating in Every Type of GTE Market -- From the Largest City To the Smallest Rural Town -- Are Self-Providing Their Own Switching.

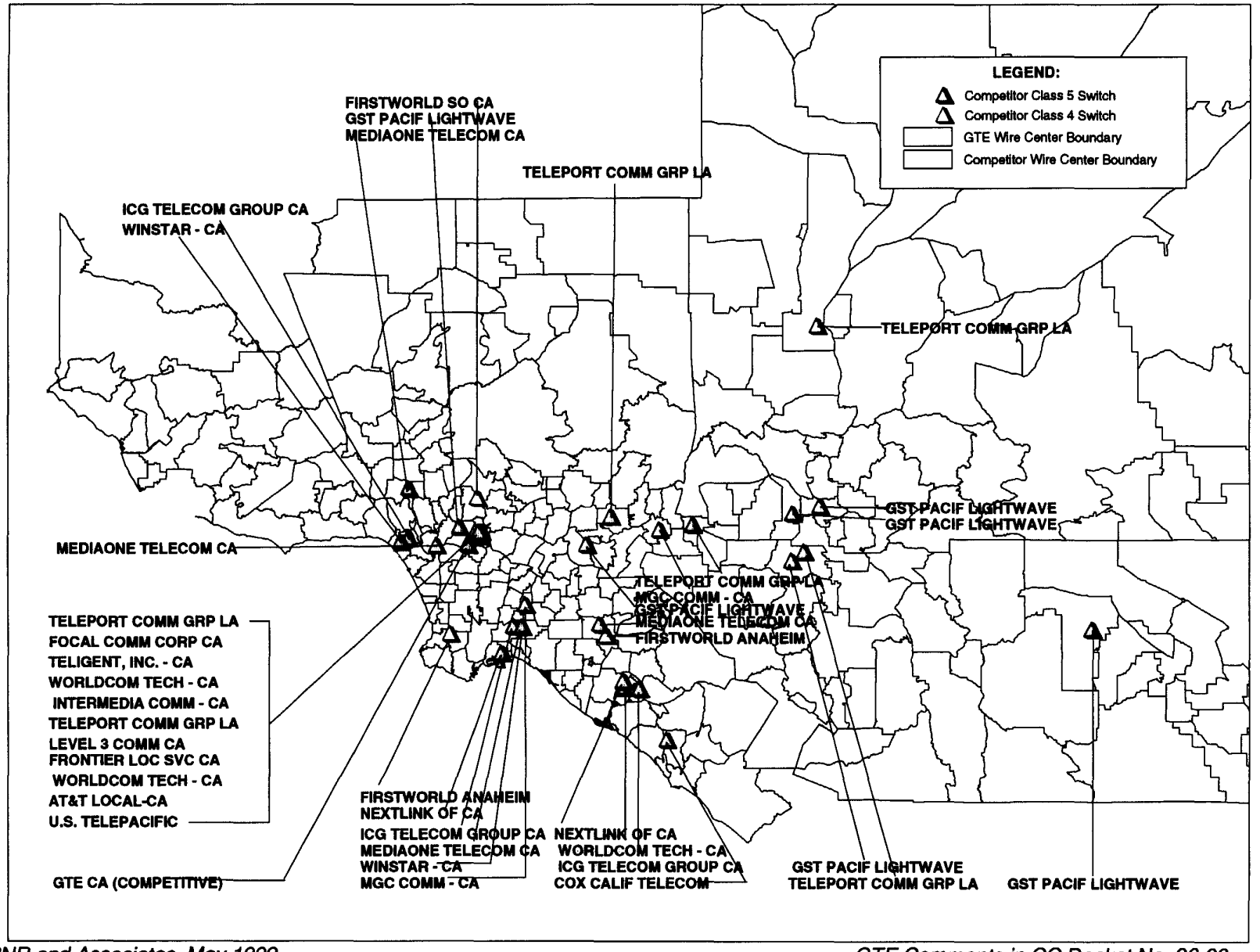
In the eight GTE markets surveyed by PNR, facilities-based CLECs have deployed 130 switches. PNR Report at 10. The following table highlights both the number of facilities-based CLECs operating in and around GTE's typical markets and the number of switches deployed in each.

Market Area	Facilities-Based CLECs	CLEC Switches
Los Angeles Area	22	47
Dallas/Fort Worth Area	27	45
Tampa Area	14	20
Fort Wayne, IN	2	2
Lexington, KY	2	2
Myrtle Beach, SC	1	8
LaBelle/Ewing/Lewistown, MO	2	3
Oxford Junction, IA	2	3

As the maps on the following three pages indicate, CLECs in markets from Los Angeles to Tampa to Oxford Junction are capable of serving an extraordinary percentage of the customers in markets of every size just with switches that are in place today. Indeed, every facilities-based CLEC operating in the GTE markets studied by PNR -- whether it offers service over wireline, cable, or fixed wireless loops, and whether it serves large markets or small -- provides its own switching. *Id.* at 23. Specifically:

- Allegiance Telecom operates one class-five switch in both Dallas and Los Angeles.
- AT&T operates two class-five switches in Dallas, one in Tampa, and one in Los Angeles.
- Cox Communications -- a cable-based provider -- operates one class-five switch in Los Angeles.
- e.spire operates three class-five switches in Dallas and one in Tampa.
- Focal Communications operates one class-five switch in Los Angeles.
- Frontier operates one class-five switch in Dallas and another in Los Angeles.
- GST operates seven class-five switches in Los Angeles and one in Dallas.
- HTC Communications serves small GTE markets in South Carolina -- including Conway and Myrtle Beach -- using three remote switches connected to the switches of its ILEC affiliate.
- Hyperion operates one class-five switch in Lexington.
- IGC Communications operates one class-five switch in Dallas, one in Lexington, and four in Los Angeles and the surrounding suburbs.
- Intermedia operates four class-four/five switches in Dallas, four in Tampa, and one in Los Angeles.

3.1 GTE Franchise Area - Greater Los Angeles Area, California CLEC Switch Deployment



PNR and Associates, May 1999

GTE Comments in CC Docket No. 96-98